

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
AB Specialty Silicones Fire - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: POLREP #4
Progress POLREP
AB Specialty Silicones Fire

Waukegan, IL
Latitude: 42.3929181 Longitude: -87.8938617

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From: Dan Haag, On-Scene Coordinator
Date: 5/29/2019
Reporting Period: 5/13/19 - 5/27/19

1. Introduction

1.1 Background

Site Number:	C5PB	Contract Number:
D.O. Number:		Action Memo Date:
Response Authority:	CERCLA	Response Type:
Response Lead:	PRP	Incident Category:
NPL Status:	Non NPL	Operable Unit:
Mobilization Date:	5/4/2019	Start Date:
Demob Date:		Completion Date:
CERCLIS ID:		RCRIS ID:
ERNS No.:		State Notification:
FPN#:		Reimbursable Account #:

1.1.1 Incident Category

Emergency Response

1.1.2 Site Description

At approximately 2145 hours on 5/3/2019, an explosion occurred at the AB Specialty Silicones, LLC plant in Waukegan, Illinois (Site). The explosion could be felt for miles and damage was caused to numerous adjacent buildings. Waukegan Fire Department (WFD) extinguished the fire by 0330 hours on 5/4/19. The incident has left 4 dead.

1.1.2.1 Location

AB Specialty Silicones, LLC is located at 3790 Sunset Avenue in Waukegan, Illinois

1.1.2.2 Description of Threat

AB Specialty Silicones, LLC is a manufacturer and distributor of specialty silicone chemicals, serving industries including: personal care, chemical manufacturing, dental & medical, mold making, electronic encapsulation, adhesives/sealants, coatings, gypsum, and pressroom. Two primary products produced and stored at the facility include: octamethylcyclotetrasiloxane (product name D4) and polydimethylsiloxane (product name SF350). Plant representatives also stated that small quantities of toluene, isopropyl alcohol, acetone, phosphoric acid, acetic acid, and sodium hydroxide flake are stored and used at the plant.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

At 0100 hours on 5/4/19, Illinois EPA requested the assistance of U.S. EPA to conduct air monitoring downwind of the incident to support WFD. An EPA OSC and START contractors arrived on scene at approximately 0345 hours and to support WFD and LCHD with downwind air monitoring. Throughout the early morning hours and into the mid-day of 5/4/19, EPA and START conducted air monitoring with a MultiRae 5-gas meter in the adjacent neighborhood downwind (south of Site), which included an elementary school, daycare, church, apartment buildings (west of the Site), and adjacent business; no elevated readings were detected.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

At approximately 2145 hours on 5/3/2019, an explosion occurred at the AB Specialty Silicones, LLC plant in Waukegan, Illinois (Site). The explosion could be felt for miles and damage was caused to numerous adjacent buildings. Waukegan Fire Department (WFD) extinguished the fire by 0330 hours on 5/4/19. The incident has left 4 dead. On 5/9/19, the search and recovery effort conducted by Coroner and WFD concluded and control of the Site was turned back over to the AB Specialty Silicones, LLC. The cause of the explosion is still under investigation as of 5/7/19, and investigators state that it could take up to a month to pinpoint the cause of the explosion. Since 5/9/19, EPA has been coordinating with AB Specialty Silicones, LLC, CSB, and OSHA to direct response actions to mitigate actively releasing or threatened release of CERCLA hazardous substances at the site, while ensuring evidence preservation for ongoing investigations.

2.1.2 Response Actions to Date

Week of 5/13 – 5/19

Operations at Plant Site:

During the operational period, the PRP made a change to their response contractor and environmental consultant; the transition officially began on 5/13 and was completed by 5/15. The transition included the management of all storm water runoff management at the plant. Repairs were made to the sand berms constructed along the north and west boundaries of the Site, an asphalt parking lot bordering the Site to the north was pressure washed and all storm sewer manholes located in the parking lot were cleaned. A crew with vacuum truck remained on standby overnight and on the weekend to manage and storm water collected in the berms during rain events.

Debris was relocated from the northwest and southwest portions of the Site to provide access to storm drains and a sanitary sewer drain that were previously unable to be accessed. The storm sewers and sanitary sewer and storm sewers were inspected, any accumulated material was removed with a vacuum truck, and inflatable plugs were installed.

An assessment of the structures at the Site by structural engineers (a contractor for the CSB and a contractor for the PRP's insurance company) was completed during the operational period. Upon the completion of the assessment and a review of the hazards associated with entry into the high-bay warehouse structure, a plan was developed to conduct a brief entry to assess the conditions of tanks, totes and containers. The initial entry into the high-bay warehouse structure was conducted by EPA and the PRP's removal contractor on 5/15 in Level C PPE. Elevated VOC levels were detected on a PID during the entry, and the VOC levels increased as entry continued further into the structure to threshold requiring turnback due to the need to upgrade respiratory protection to supplied air. During the entry a drum of DOT hazard class 4.3 (Dangerous When Wet) was discovered, and the drum appeared to be a satellite waste accumulation drum, as a consolidation funnel was still attached to the drum. Other drums of DOT hazard class 3 (Flammable) and DOT hazard class 8/3 (Corrosive primary hazard with Flammable subsidiary hazard) were discovered with hand pump and rotary pumps placed within the open bungs of the drums.

Additional entries were made on 5/16 and 5/17 to properly close and secure the drums of DOT hazard class 4.3, 3 and 8/3 material as well as to remove high pressure gas cylinders from the high-bay warehouse structure. All but one cylinder that was identified during the entries was removed; access to this cylinder of a non-flammable gas was unsafe due to the structural damage to the area of the building where it was located. In total, 21 cylinders were removed from the high-bay warehouse structure are removed from the debris piles near the former laboratory section of the building. The cylinders were identified and secured to a fence for safe storage until proper disposal or venting/flaring onsite can be arranged. The cylinders identified included: 1 x acetylene, 1 x oxygen, 7 x argon, 1 x methylacetylene-propadiene propane (MAPP gas), 3 x liquefied propane (removed from forklifts), 3 x hydrogen, 2 x compressed air, and 3 x inert gas/helium.

WFD responded to the Site on 5/14 and 5/15 to investigate a report of smoke at the Site. It was determined that a chemical reaction was still occurring within a vessel in the low-bay structure. The smoke was determined to be a silicon dioxide, a byproduct of the reaction. WFD determined that there was no explosion risk, and sprayed water into the vessel to end the chemical reaction. No further evidence of the chemical reaction has been observed since.

Operations at Sunset Avenue Ditch:

Daily inspection and maintenance of hard boom, sorbent boom and sorbent pom poms with change out as needed occurred during the operational period. A vacuum truck was utilized to remove recoverable sheen or product as needed. Repairs were also made to two underflow dams that were previously constructed. Three small sets of hard boom were also installed in the ditch; one near the outfall to the ditch and one near each of the underflow dams.

Operations at Wetlands and Osprey Lake Area:

Daily inspection and maintenance of hard boom, sorbent boom and sorbent pom poms with change out as needed occurred during the operational period. Additional boom was installed during the operational period and included: 1) 100' section of protection boom in the wetlands to protect a private pond north of the wetlands area; 2) 100' expansion of the primary boom placed where the wetlands enters Osprey Lake; 3) a small hard boom set near where the storm sewer system daylighted into the drainage ditch west of N. Delaney Rd; and 4) 600' of deflection/shoreline protection boom in Osprey Lake.

START performed water quality testing in the wetlands with a YSI meter; 15 locations were tested, and no abnormal results were observed.

On 5/17, EPA and START walked the Des Plaines River Trail from North Skokie Road to the confluence of Osprey Lake and the Des Plaines River. It was observed that the water level had dropped significantly since the last observation and the flood plain was accessible from both sides of the trail: no sheening was observed along the banks of the flood plain, and no stained vegetation was observed along the banks or within any snags in the flood plain. No sheen was observed passing under the pedestrian bridge along the trail either.

Week of 5/20 – 5/26

Operations at Plant Site:

A full site asbestos survey was performed by the PRP's contractor; no friable asbestos was identified during the survey. Samples of suspected bulk non-friable asbestos containing material were collected for analysis at a laboratory via polarized light microscopy. Perimeter air samples were also collected and analyzed for asbestos in accordance with NIOSH Method 7400. Preliminary results received for the air samples were well below the OSHA PEL. Debris piles located along the south of the Site (piles created during the search and recovery operation) were

covered with poly sheeting as a precaution.

Laboratory chemicals that were found in a flammable storage cabinet located near the southern debris piles along with other chemicals found on the debris piles were labpacked by the PRP's contractor. Labpacked items included: sulfuric acid, potassium hydroxide solution, chloroform, methanol, ethanol, isopropyl alcohol with hydrochloric acid mixture, and propane lecture bottles.

Debris removal/relocation and mitigation of overhead obstructions continued throughout the operational period as weather permitted to provide for safe access routes for entry teams to remove totes/containers of CERCLA hazardous substances, DOT hazardous materials, and RCRA hazardous waste. Debris was also relocated from the north property boundary of the site, so that pockets of pooled material identified could be removed with a vacuum truck.

EPA continued to coordinate with OSHA and CSB while directing the PRP's response actions to address actively releasing or threatened releases of hazardous substances to ensure proper documentation for evidence preservation purposes. An evidence warehouse was also identified and procured by the PRP late in this operational period, which will allow for supplies and totes/containers of products to be relocated from the high-bay warehouse. This will also provide for safer access by the response contractors to remove sludge on the warehouse floor and to begin the full process of evaluating and emptying above ground storage tanks within the high-bay building.

EPA and START supported CSB and their contractors with air monitoring during their photo and video documentation of the Site.

EPA and START conducted field screening of the soil around 3 transformers damaged during the fire with a Dexsil Clor-N-Soil kit; the results indicated PCBs less than 50 ppm. EPA was able to confirm with ComEd that all 3 transformers were non-PCB.

Operations at Sunset Avenue Ditch:

Daily inspection and maintenance of hard boom, sorbent boom and sorbent pom poms with change out as needed occurred during the operational period. A vacuum truck was utilized to remove recoverable sheen or product as needed.

Operations at Wetlands and Osprey Lake Area:

Daily inspection and maintenance of hard boom, sorbent boom and sorbent pom poms with change out as needed occurred during the operational period. Additional boom was installed during the operational period and included: 1) addition of 400' of boom to the previously installed deflection/shoreline protection boom in Osprey Lake; and 2) installation of a second hard boom set on Osprey Lake downstream of the footbridge located west of The Preserve at Osprey Lake Apartments as a precaution due to reduced water levels and increased water flow under the footbridge.

Boom and sorbent inspection/maintenance/change-out continued throughout Memorial Day Holiday Weekend, and vacuum truck crew remained on standby all weekend to support storm water management during rain events.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

2.1.4 Progress Metrics

Waste Stream	Medium	Quantity	Manifest #	Treatment	Disposal
Contaminated sorbent/debris		1x20 yd rolloff			pending
Contaminated storm water		40,000 gals			pending

2.2 Planning Section

No information available at this time.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
TAT/START	\$45,000.00	\$25,000.00	\$20,000.00	44.44%
Intramural Costs				
Total Site Costs	\$45,000.00	\$25,000.00	\$20,000.00	44.44%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

3.1 Unified Command

AB Specialty Silicones, LLC
U.S. Environmental Protection Agency

3.2 Cooperating Agencies

Chemical Safety Board
City of Gurnee Park District
City of Waukegan Department of Public Works
Illinois Environmental Protection Agency
Illinois State Fire Marshal
Lake County Department of Transportation
Lake County Emergency Management Agency
Lake County Health Department
Lake County Stormwater Management Commission
U.S. Department of Labor - Occupational Safety & Health Administration
Waukegan Fire Department

4. Personnel On Site

U.S. EPA - 1
START - 1

5. Definition of Terms

ATSDR: Agency for Toxic Substances and Disease Registry
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CSB: Chemical Safety Board
DOT: U.S. Department of Transportation
IEPA: Illinois Environmental Protection Agency
LCEMA: Lake County Emergency Management Agency
LCHD: Lake County Health Department
LCSMC: Lake County Stormwater Management Commission
mg/L: Milligrams Per Liter
NIOSH: National Institute for Occupational Safety and Health
OSC: On-Scene Coordinator
PCB: Polychlorinated Biphenyl
PEL: Permissible Exposure Limit
POLREP: Pollution Report
ppm: Parts Per Million
PRP: Potentially Responsible Party
START: Superfund Technical Assessment and Response Team Contractor
U.S. EPA: United States Environmental Protection Agency
VOC: Volatile Organic Compound
WFD: Waukegan Fire Department

6. Additional sources of information

6.1 Internet location of additional information/report

6.2 Reporting Schedule

POLREPS to be submitted weekly.

7. Situational Reference Materials

No information available at this time.







BINETTE

TC

6901

NITROGEN
NON-FLAMMABLE GAS
99.9%

MAIN
250